

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte MURRY L. NEAL and ALLAN D. BAIN

Appeal No. 2003-1796
Application No. 09/513,563

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection (Paper No. 13, mailed August 7, 2001) of claims 1, 5 to 10, 16 and 23 to 28. Claims 11 to 15, the only other claims pending in this application, have been withdrawn from consideration.

We AFFIRM-IN-PART, however, for reasons explained infra, we have denominated our affirmance of the rejection of claim 8 a new ground of rejection under 37 CFR § 1.196(b).

BACKGROUND

The appellants' invention relates to flexible body armor designed to defeat high-velocity projectiles (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

Claims 1, 5 to 10, 16 and 23 to 28 stand rejected under 35 U.S.C. § 103 as being unpatentable over either Dunbar¹ or Rudoi², in view of Chediak³. The examiner's complete reasoning in support of the rejection (final rejection, pp. 2-3) is as follows:

Dunbar discloses a disc shaped armor plate (figure 5) having a first inclined surface, which extends from the center dome portion of the disc and leads to a substantially flat surface portion circumferentially extending around the inclined surface (i.e. the inclined surface flows into the substantially flat circumferential surface and a containment wrap.) Rudoi likewise discloses a disc shaped armor plate with containment wrap. (See Figures 14-30; column 8, lines 31-44, and column 10, lines 36-61.) Both Dunbar and Rudoi fail to disclose the specific mechanical properties of the ceramic material used in making the discs nor do they disclose using zirconia in the material forming the disc. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make the ceramic material have a hardness of at least 12 Gpa and a fracture toughness of at least 3.8 Mpa-m(¹/₂), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980). In view of the teachings of Chediak, it would have been obvious to make the ceramic disc with some zirconia in the material used to make the disc in order to increase the strength and fracture resistance of the disc to a high speed bullet.

¹ U.S. Patent No. 3,563,836, issued February 16, 1971.

² U.S. Patent No. 4,633,756, issued January 6, 1987.

³ U.S. Patent No. 5,824,940, issued October 20, 1998.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, to the arguments against the rejection articulated by the appellants⁴ and the examiner's response to the appellants' arguments⁵. As a consequence of our review, we make the determinations which follow.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Claims 1 and 23 to 25

We will not sustain the rejection of claims 1 and 23 to 25 under 35 U.S.C. § 103.

⁴ See the appellants' brief (Paper No. 18, filed January 29, 2002) and reply brief (Paper No. 22, filed March 24, 2003).

⁵ See the examiner's answer (Paper No. 20, mailed January 21, 2003).

The appellants argue that the applied prior art does not suggest a disk comprised of a fiber induced composite ceramic material comprising alumina and having a hardness of at least 12 GPa and a fracture toughness of at least $3.8 \text{ MPa} \cdot \text{m}^{1/2}$. We agree. It is our determination that even if it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified Dunbar and Rudoi in the manner set forth by the examiner in the rejection before us in this appeal, such would not result in the claimed invention since such would not result in a disk comprised of a fiber induced composite ceramic material comprising alumina. Thus, the examiner has not established the obviousness of the subject matter of claims 1 and 23 to 25. Accordingly, the decision of the examiner to reject claims 1 and 23 to 25 under 35 U.S.C. § 103 is reversed.

Claims 5 to 7 and 26 to 28

We will not sustain the rejection of claims 5 to 7 and 26 to 28 under 35 U.S.C. § 103.

The appellants argue that the applied prior art does not suggest a disk comprised of a fiber induced composite ceramic material comprising alumina and toughened metallic oxide composite. We agree. It is our determination that even if it would have been obvious at the time the invention was made to a person of ordinary skill in the art to

have modified Dunbar and Rudoi in the manner set forth by the examiner in the rejection before us in this appeal, such would not result in the claimed invention since such would not result in a disk comprised of a fiber induced composite ceramic material comprising alumina and toughened metallic oxide composite. Thus, the examiner has not established the obviousness of the subject matter of claims 5 to 7 and 26 to 28. Accordingly, the decision of the examiner to reject claims 5 to 7 and 26 to 28 under 35 U.S.C. § 103 is reversed.

Claim 16

We will not sustain the rejection of claim 16 under 35 U.S.C. § 103.

The appellants argue that the applied prior art does not suggest a disk having a radius, a concentric dome coextensive with a portion of the radius, and a substantially flat surface circumferentially surrounding the dome. We agree. It is our determination that even if it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified Dunbar and Rudoi in the manner set forth by the examiner in the rejection before us in this appeal, such would not result in the claimed invention since such would not result in a disk having a substantially flat (i.e., planar) surface circumferentially surrounding the dome. Thus, the examiner has not established

the obviousness of the subject matter of claim 16. Accordingly, the decision of the examiner to reject claim 16 under 35 U.S.C. § 103 is reversed.

Claim 8

We sustain the rejection of claim 8 under 35 U.S.C. § 103.

Claim 8 reads as follows:

An apparatus comprising:
a discus shaped disk for use in armor systems, having a radius, a first inclined surface co-extensive with a segment of the radius and a thickness, and further having containment wrap coupled to the first inclined surface.

In the rejection of claim 8, the examiner did not ascertain any difference between either Dunbar or Rudoi and claim 8⁶ and did not determine that it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified either Dunbar or Rudoi in any respect to arrive at the subject matter of claim 8. Thus, for the rejection of claim 8 under 35 U.S.C. § 103 to be proper, claim 8 must be anticipated by either Dunbar or Rudoi since it is well settled that a disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C.

⁶ After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

§ 103, for "anticipation is the epitome of obviousness." Jones v. Hardy, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). See also In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

The appellants argue (brief, p. 10) that neither Dunbar or Rudoi teach or suggest the containment wrap as recited in claim 8. We do not agree. Claim 8 reads on Rudoi's plate 38 enclosed within outer envelope or casing 32. Claim 8 reads on Dunbar's platelet 10, 10' or 10" embedded in matrix 20. While each individual disk of either Dunbar or Rudoi is not fully encased within a containment wrap in the same manner as disclosed

by the appellants, claim 8 does not require such. Limitations are not to be read into the claims from the specification. See In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Since claim 8 is readable on both Dunbar and Rudoi, claim 8 is anticipated by both Dunbar and Rudoi under 35 U.S.C. § 102(b). Affirmance of the 35 U.S.C. § 103 rejection is appropriate, since as set forth above "anticipation is the epitome of obviousness." Thus, the decision of the examiner to reject claim 8 under 35 U.S.C. § 103 is affirmed.

Inasmuch as the basic thrust of our affirmance of the 35 U.S.C. § 103 rejection of claim 8 is that the claim is anticipated rather than obviousness, we hereby designate the affirmance to be a new ground of rejection pursuant to 37 CFR § 1.196(b) to allow the appellants a fair opportunity to react thereto (see In re Kronig, 539 F.2d 1300, 1302-03, 190 USPQ 425, 426-27 (CCPA 1976)).

For the reasons set forth above, the decision of the examiner to reject claim 8 under 35 U.S.C. § 103 is affirmed, with the affirmance constituting a new ground of rejection under 37 CFR § 1.196(b).

Claims 9 and 10

We will not sustain the rejection of claims 9 and 10 under 35 U.S.C. § 103.

The appellants argue that the applied prior art does not suggest a containment wrap comprising an adhesive substrate coat and glass fiber material overlaying the adhesive substrate. We agree. It is our determination that even if it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified Dunbar and Rudoi in the manner set forth by the examiner in the rejection before us in this appeal, such would not result in the claimed invention since such would not result in a containment wrap comprising an adhesive substrate coat and glass fiber material overlaying the adhesive substrate. Thus, the examiner has not established the obviousness of the subject matter of claims 9 and 10. Accordingly, the decision of the examiner to reject claims 9 and 10 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 5 to 10, 16 and 23 to 28 under 35 U.S.C. § 103 is affirmed with respect to claim 8 and reversed with respect to claims 1, 5 to 7, 9, 10, 16 and 23 to 28. However, for reasons explained supra, we have denominated our affirmance of the rejection of claim 8 to be a new ground of rejection under 37 CFR § 1.196(b)

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b). 37 CFR § 1.196(b) provides that, "[a] new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART; 37 CFR § 1.196(b)

CHARLES E. FRANKFORT
Administrative Patent Judge

JOHN P. McQUADE
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

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